Vatsa Patel

Passionate & Proven Software Systems Engineer | CS Gratuate student

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/VatsaPatel

Highlights

- Developed a Slack plugin application that helps combat abusive conduct at a workplace backed by a Multi-Label classifier using Neural Net. Currently used at IBM research team's Slack.

- Developed Learning Management Platform for my undergrad university in which lead & mentored a team of 5 engineers.

- My UI & UX interface designs have been featured on Dribbble.

- Ideated a startup at Qualcomm Labs incubator which was selected in the top-10 startup ideas out of thousands of applicants.

- Won Gold medal at the International level in Football representing India at the South Asian Games 2014.

- Submitted and got invited to present my research paper in IEEE on Federated Learning - Privacy Enhanced Collaborative Machine Learning.

Experience

3D Room Space, LA | Software Engineering Intern • May 2020 - Present

- Building the core services for our rental platform to automate leasing and easily find medium-term rentals.
- Currently leading the core engineering team of 5 engineers .
- Rearchitected to serverless containerized microservices environment.

Tech Stack: GCP Cloud run, GKE | Node, GraphQL | React Native, React, Gatsby

Freelance Contractor • May 2020 - July 2020

- **Project Bacchus, NY:** Helped move to a serverless architecture and built Home Feed, in-app messaging & dashboard.
- Built a CLI tool for a client to tag and push docker images to multiple Container Registries with multiple login management integrating with their internal system.
- **Wetherbee's Unofficial:** Refactored old React-Native app and added features to take Quiz, View Flashcards, Watch Learning content, take notes. Also created an Admin panel using Django to curate content.

A D Patel Institute of Technology | Software Engineer

Learning Management Platform • August 2017 - September 2018

- Envisioned, Designed & built a suite of applications solving existing paper-based problems like Scheduling, Information sharing, Evaluations, Asset Management, etc.
- Lead & mentored team of 5 engineers, We engineered cross-platform backend services which are architected to scale even on low-end hardware.
- Designed UI/UX interface designs that got featured on Dribbble. bit.ly/2TMf0n0
- In-house designed & 3D printed biometric fingerprint devices that facilitate classroom authentication centrally.
- Deployed an in-house private Cloud cluster through OpenStack with auto-scaling.

Tech Stack: React, React Native, Electron | NodeJS, Golang | MemSQL, Aerospike.

Skills

FrontEnd
JavaScript - React, React-Native, Electron, JQuery, WebAssembly

Kotlin, Android, HTML5, CSS.

BackEnd
NodeJS, PHP, Python, Java, C++.
Database: SQL : MySQL, Postgre.
NoSQL : MongoDB, Redis, Aerospike

Tools & Libraries
Compute & Netwoking: OpenStack distributed cluster, PfSense.
DevOps: GCP, AWS, Docker, Kubernetes, CI/CD
GraphQL, Jupyter Notebook.

Design
Sketch, Illustrator, Autodesk Inventor, Keyshot, Principle, Figma, Photoshop.

Education

SJSU - San José State University
Pursuing Masters in Computer Science

Dual Specialization: Networking Software & Enterprise Software Technologies

Jan 2020 - Dec 2021 Expected

Gujarat Technological University

Bachelor of Engineering in Computer Science

Graduated **First Class with distinction**

Jul 2015 - June 2019

ADIT Alumni Hub · http://alumni.adit.ac.in · August 2016 - March 2018

- Designed & Developed a social platform from scratch to allow Alumni's to reconnect with each other, discover other alumni's in same region and profession, share jobs & events.
- Got 6,400 users within first 3 months.

Tech Stack: React & LEMP Stack

Smarq Technologies | Founded a Smart Home startup · Nov 2015 - May 2016

- Envisioned & Designed a tightly-knit ecosystem of smart sensors capable of various automation sequences within a home based on local location of user.
- USP: Smarq Sense - A smart system that generates ever-adapting automation sequences for each user.

Purva Couture | Software Developer · April 2015 - December 2015
Designer Fashion Studio

- Single-handedly developed a Business Operations system that managed from Sales to Production to Deliveries handling 700+ clients & revenue of $1M+.

Projects

Reverse proxy to increase downlink bandwidth · Aug 2019 - Sep 2019

- Developing a reverse proxy that substantially minimizes the effect of Bandwidth Delay Product on TCP Throughput by buffering the file on multiple connections.
- Preliminarily achieved 8x improvement in streaming on intercontinental bandwidth with BBR congestion control.

Federated Learning - Privacy Enhanced Collaborative Machine Learning · Jan 2019 - Aug 2019

- Optimized Federated Averaging Algorithm optimized for Large-Scale LSTM-CNN when the input consists of large number of small-sized updates in Homomorphic Encryption.
- Created proof of concept app for local training of cifar-10 classification and subsequent parameter server.
- Submitted a research paper in IEEE Journal

Finalists at Robocon Asia 2017 - MIT, Pune   Dec 2016 - Mar 2017

- Collaborated in a team of 20 members from diverse domains and applied problem-solving skills combining areas of multiple domains.
- Developed custom firmware & Java application for a fully autonomous robot.

3D Indoor GPS   June 2017

- Implemented a 3D Indoor GPS solution using UWB to automate lights based on location context.
- Achieved accuracy of avg. 27cm considering wall interference.